## **HEALTH AND SAFETY:**

### Is anyone being exposed to the solvents in the groundwater?

No. The solvents in the ground water are in the shallow aquifer, which is not a source of drinking water for the City of Memphis. The shallow aquifer groundwater is restricted from use as a drinking water source by the Memphis-Shelby County Health Department. This restriction applies to all of Shelby County.

## Is the drinking water safe?

Yes, the drinking water is safe. The affected groundwater is in the shallow aquifer, which is not used for drinking. The drinking water in Memphis comes from the Memphis Sand aquifer, which has not been affected by historic activities at the former Memphis Depot. In the Record of Decision, we have identified areas within the shallow aquifer that require cleanup to reduce the potential risks of exposure and to meet the cleanup objectives outlined in the Record of Decision. We are now in the process of designing and implementing the technologies that will reduce or eliminate these chlorinated solvents from the groundwater, and ensure the future safety of this site for the intended re-use.

### Are there health hazards from the Depot to residents in the area?

No impact to human health of residents in the area has been indicated. Several public health assessments have been completed for the Memphis Depot, the latest in 2000. The assessments indicated no impact to human health of residents in the area. There is no public access to areas on the site where the environmental conditions exceed the cleanup standards. The City's drinking water comes from a deep aquifer, which is about 300 feet below the ground surface and our investigation indicates it has not been affected. The groundwater being treated at the Depot is from the shallow aquifer, which is about 80 feet below the ground surface.

#### Does CWM pose a risk to the health and safety of the community?

No. The CWM removal action was completed in 2001. All CWM materials were excavated and removed from the site and do not pose a risk to the community.

The Army Corps of Engineers, the Edgewood Chemical Biological Center and the contractors have many years of experience removing these materials. The removal action was contained within a state-of-the-art, sealed structure with complete air filtration and monitoring as part of a comprehensive Site Safety Submission prepared by the Corps. This document detailed the steps that were taken to safely remove CWM materials, while ensuring the safety of the surrounding neighbors during the cleanup.

#### Are actions at the Depot affecting cancer rates within the local community?

At this time, we have no scientific evidence of a direct correlation between cancer rates and past activities at the Depot. The Memphis Depot works closely with the Agency for Toxic Substances and Disease Registry (ATSDR) and the Memphis- Shelby County Health Department in an effort to identify health concerns that may be related to

environmental conditions. In December 1999, ATSDR released an updated draft Public Health Assessment. ATSDR is the agency responsible for responding to public health questions, and works in association with the local Health Department to provide appropriate health education and assistance to the community.

# I worked at the Depot. Could the chemicals I was exposed to in my job make me sick?

If you believe you have a job-related illness, please contact the Department of Labor or any active federal facility to request a CA-1 form. You must obtain assistance from your physician in completing the form. The Department of Labor will review the form and advise you what to do.

Was there a release of mustard agent at Dunn Field during the CWM removal? No. Air monitoring and soil sampling results have confirmed that mustard agent was not detected, nor was it present inside the vapor containment structure (VCS).

# Why were three workers at Dunn Field sent to the hospital during the CWM removal?

Three employees of the CWM contractor, UXB International Inc., had been working inside the VCS for approximately one hour, performing soil removal work on a 500-kg empty bomb casing which was being removed from Site #24-A. They were dressed in Level D protective clothing, which included a facemask respirator with a High Efficiency Particulate Air filter, in accordance with the Site Safety Plan. After leaving the VCS, the workers said they noticed a strange odor during the excavation. They also reported feelings of nausea, headache, dizziness and sinus irritation. They were supplied with oxygen and observed by the on-site medical team for 30 minutes. Their symptoms subsided but did not completely disappear. The incident was reported to the on-site Safety Specialist, who directed the workers to be examined by a qualified physician at the Regional Medical Center in Memphis.

The monitoring equipment inside the VCS used the most advanced technology to detect chemical warfare materiel in the air and soil. The results of all samples collected before and after the incident confirm that no mustard agent was present at the site. The soil contained low levels of two breakdown by-products of sulfur mustard, known as thioxane and dithiane. These by-products were produced during the decontamination process when the mustard agent was combined with a bleach mixture to neutralize the agent prior to being buried in 1946

The physicians at the Regional Medical Center conducted a full examination of the three workers, including blood tests. The examination revealed no evidence of exposure to mustard or to related chemicals. However, based on the symptoms listed on the material safety data sheet for dithiane, the CWM physician's at the Regional Medical Center believe dithiane could have caused the workers' symptoms.